

AD9909210C5

A1

Service Manual

IC Recorder

RR-QR80

Colour

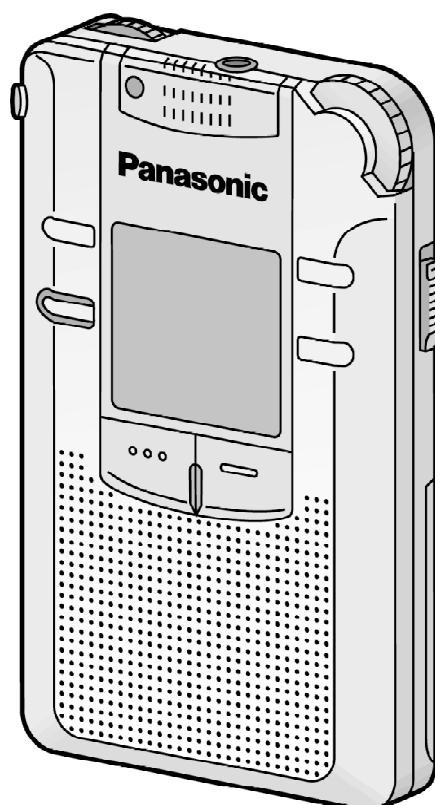
(S).....Silver Type

Areas

(P).....U.S.A.

(PC).....Canada.

(E).....Europe, Asia, Latin America, Middle East
and Africa.



SPECIFICATIONS

Specification

Power requirement: DC 3V (two R03/LR03, AAA, UM-4 batteries)
 Power output: 110 mW (max.)
 Frequency response: 450 Hz - 5.0 kHz (-6 dB, Extra Mic in - HP out, HQ mode)
 : 37 dB (Built-in Mic, HQ mode)
 k:
 Output jack; Earphone, 3.5 mm (1/8 in.) 200 mV 16 Ω
 Output jack; Mic, 3.5 mm (1/8 in.) 0.56 mV
 Speaker: 2.8 cm (13/32 in.) 8 Ω
 Dimensions(W×H×D):
 Max dimensions; 56.0×91.7×13.3 mm / (23/16×35/8 ×1/2in.)
 Cabinet dimensions; 55.0×91.0×12.4 mm / (23/16×39/16×1/2in.)
 Weight:
 With batteries; About 66 g (2.3 oz.)
 Without batteries; About 47 g (1.7 oz.)
 Battery life:
 When used at 25°C(77°F) and on a flat and stable surface]
 Batteries; Panasonic alkaline batteries
 Playback; About 15 hours
 Recording; About 30 hours
 Battery life may be less depending on the operating conditions.
 Notes:
 Specifications are subject to change without notice.
 Weight and dimensions are approximate.

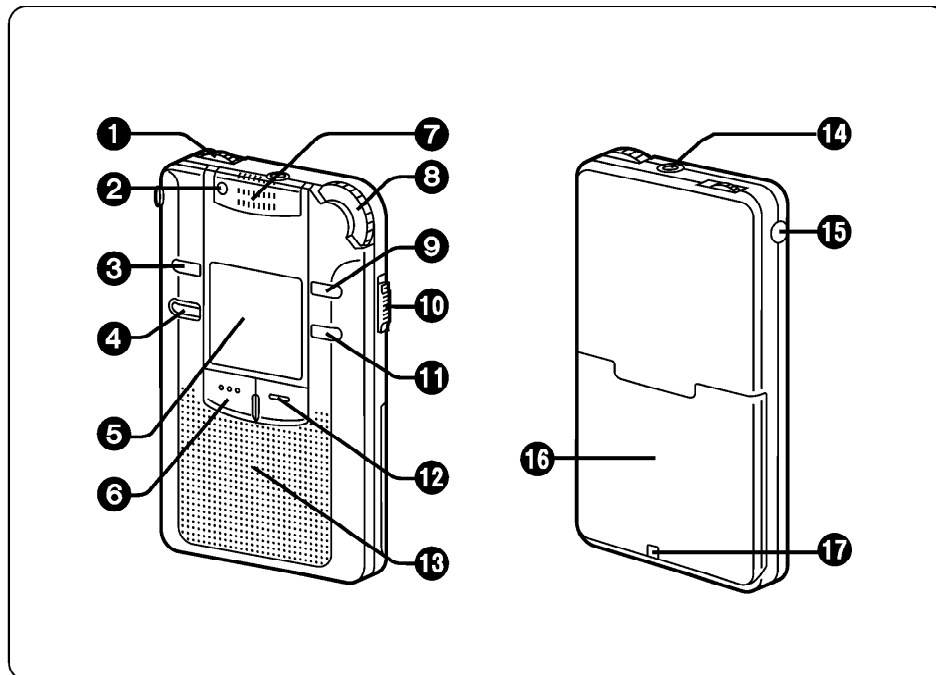
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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic®

1. Features



- | | |
|--|---|
| ① Volume control (VOL) | ⑩ Hold switch (HOLD) |
| ② Recording lamp | ⑪ Folder button (FOLDER) |
| ③ Divide button (DIVIDE) | ⑫ Recording, pause button (•REC, ■ PAUSE) |
| ④ Erase button (ERASE) | ⑬ Speaker |
| ⑤ Display screen | ⑭ Microphone jack (MIC) |
| ⑥ Stop button (STOP) | ⑮ Earphone jack (φ) |
| ⑦ Microphone (MIC) | ⑯ Battery cover |
| ⑧ Play/stop, select dial (PLAY/STOP SEL) | ⑰ Hand strap hole |
| ⑨ Mode button (MODE) | |

2. Operation Check Mode

This unit is equipped with the functions to check it to record or playback usually and the display of LCD.

- Caution!

When the checking operation is performed, all recorded data will be cleared.

Note:

When there are no available items of any track, the unit can not be operated to check it to record and playback.

To continue record and playback check, erase unneeded items.

2.1. To Enter Operation Check

1. Set the HOLD mode.
2. Press and hold down the STOP switch.

3. While hold down the STOP switch and press the MODE switch at short time.

4. Release the STOP switch.

Note:

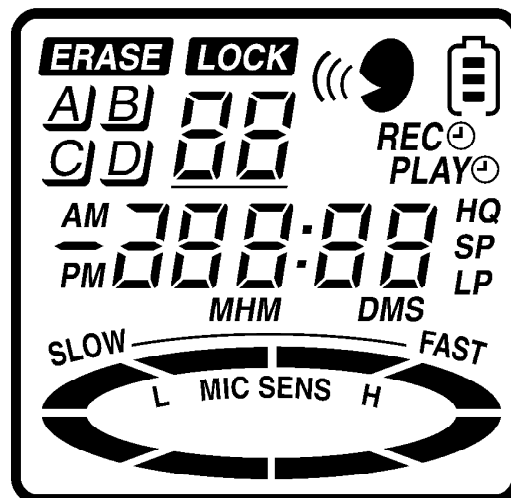
The item 2 to 4 shown above should be operated within a second.

5. After all segment of LCD lights up, the unit is entered to Operation Check Mode. During the Operation Check Mode, the Recording LED is blinking.

2.2. Operation Check Method

1. Check all segment of LCD lights up. **Fig.2-1.**

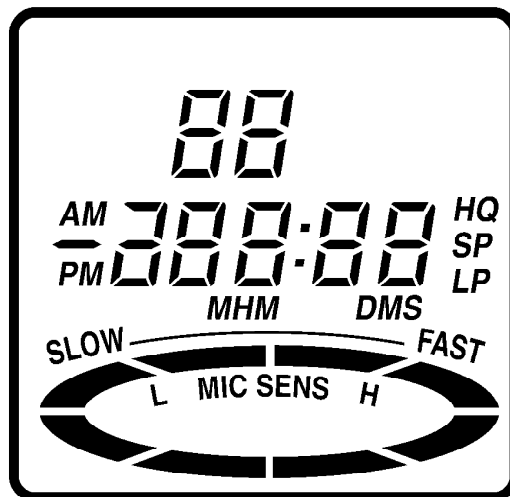
Fig.2-1.



2. Release the HOLD mode.

3. Check the display of LCD is displayed as shown below. **Fig.2-2.**

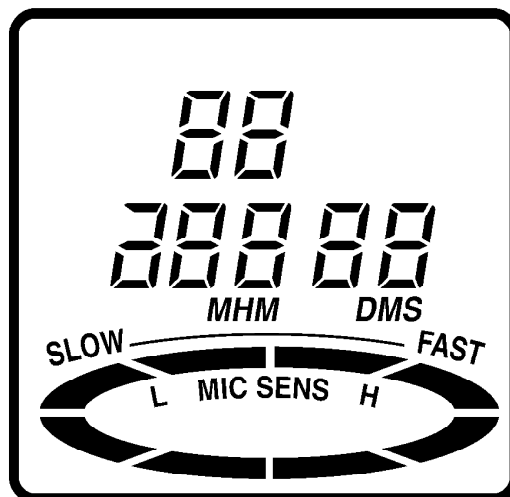
Fig.2-2.



4. Press the MODE switch.

5. Check the display of LCD is displayed as shown below. **Fig.2-3.**

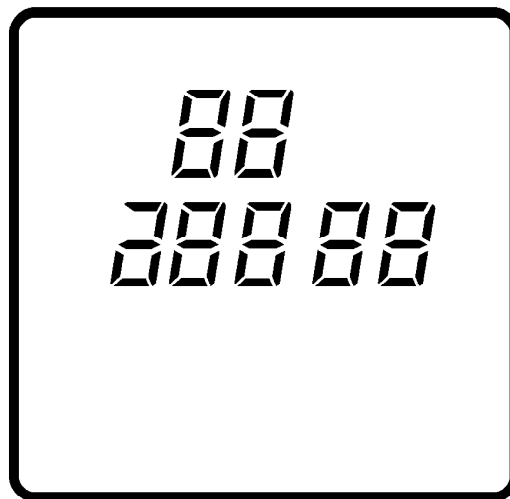
Fig.2-3.



6. Press the FOLDER switch.

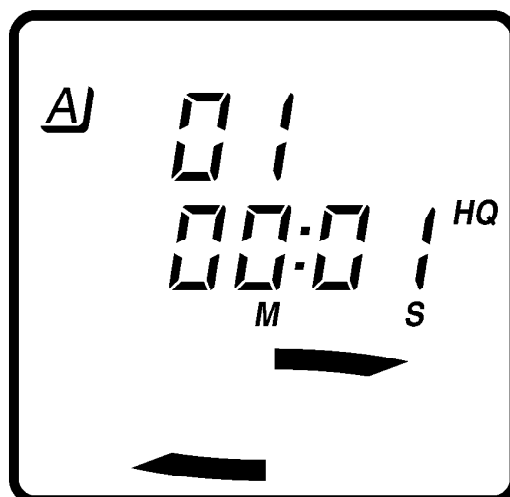
7. Check the display of LCD is displayed as shown below. **Fig.2-4.**

Fig.2-4.



8. Press the REC switch and record a voice. **Fig.2-5.**

Fig.2-5.

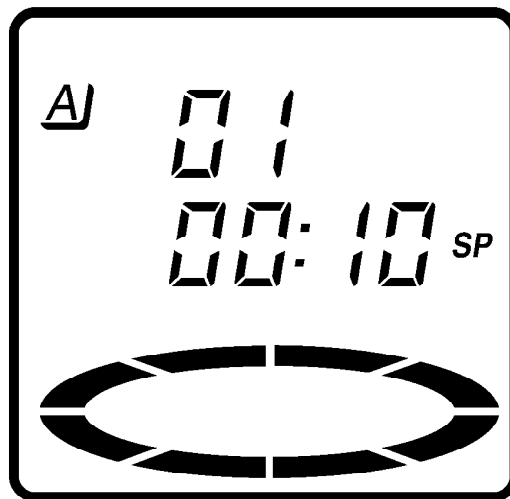


9. Press the STOP switch.

10. The display of LCD as shown below is 10 seconds the recording.

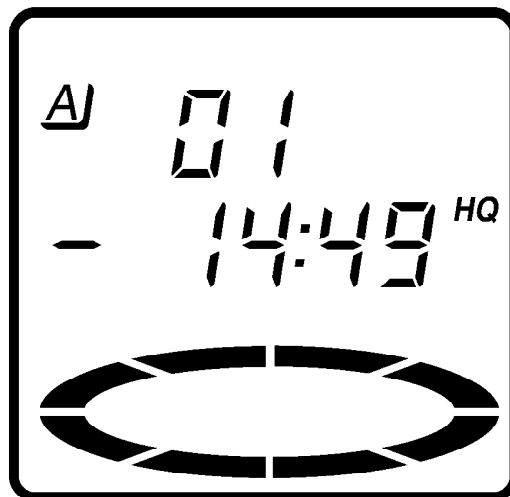
Fig.2-6.

Fig.2-6.



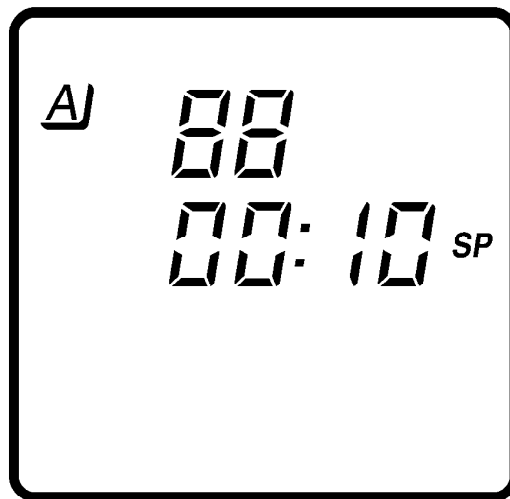
11. Press the ERACE switch to playback.
12. In playback, check the display of LCD is displayed as shown below. (The display of LCD is difference from the shown below by the time of recording.) **Fig.2-7.**
13. In playback, check the unit to be fast playback operation when the DIVIDE switch is pressed.

Fig.2-7.



14. When the playback of 10 seconds recording is finished, the display of LCD is displayed as shown below. **Fig.2-8.**

Fig.2-8.

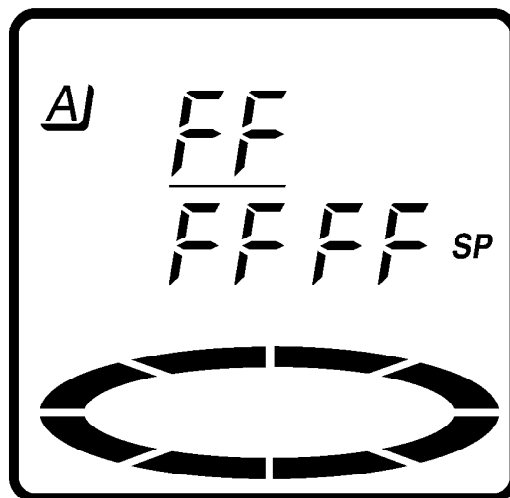


15. Pressing the PLAY/STOP and select dial continuously. The format is started.

Note:

The format is started once, all recorded data in the Flash Memory will be cleared. **Fig.2-9.**

Fig.2-9.

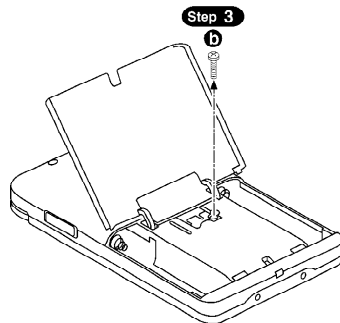
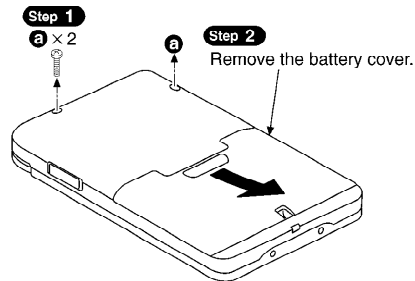


16. Operation Check Mode is canceled when the battery cover is opened.

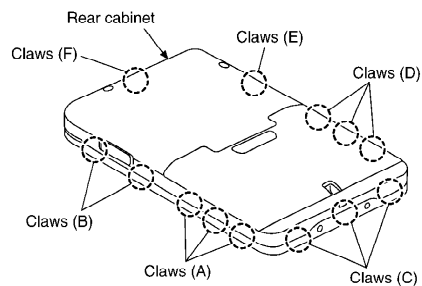
3. Operation Checks and Component Replacement / Procedures

- NOTE** 1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
2. For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.

1. Checking for the P.C.B. (A side)

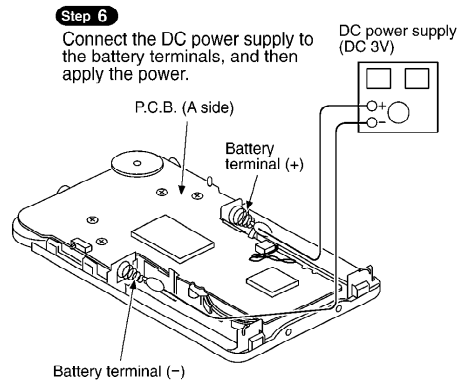


Step 4
First, release the claw (A), and then do the claw (B), (C), (D), (E) and (F) in turn.



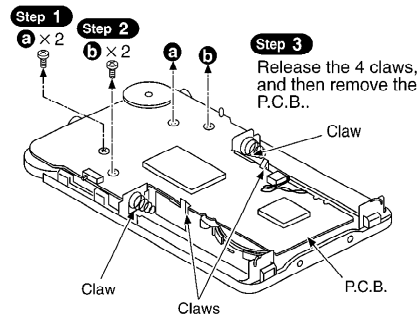
Step 5
Remove the rear cabinet ass'y.

• Check the P.C.B. (A side) as shown below.

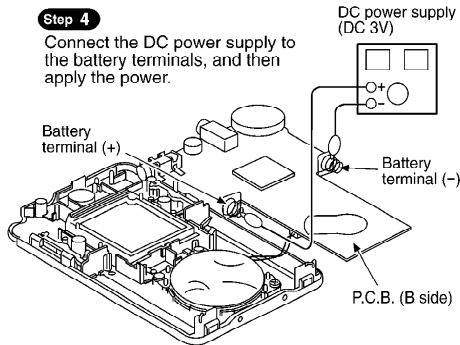


2. Checking for the P.C.B. (B side)

• Follow the **Step 1** - **Step 5** of the item 1 in checking for the P.C.B. (A side).

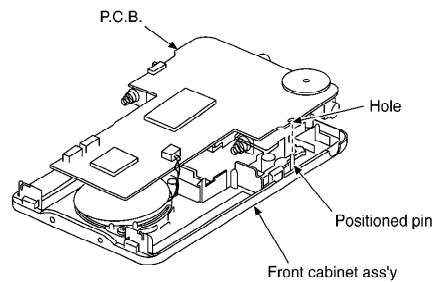


- Check the P.C.B. (B side) as shown below.

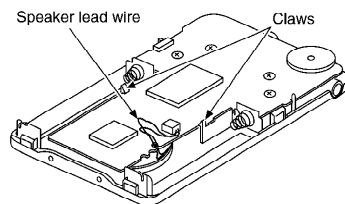


Notice for installation of P.C.B.

1. Align the positioned pin of front cabinet ass'y with the hole of P.C.B., and then install the P.C.B..

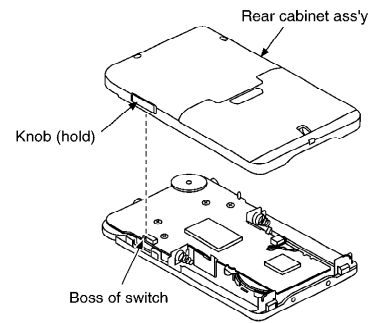


2. Make sure that the two claws are latched.
3. Arrange the speaker lead wire on the P.C.B..



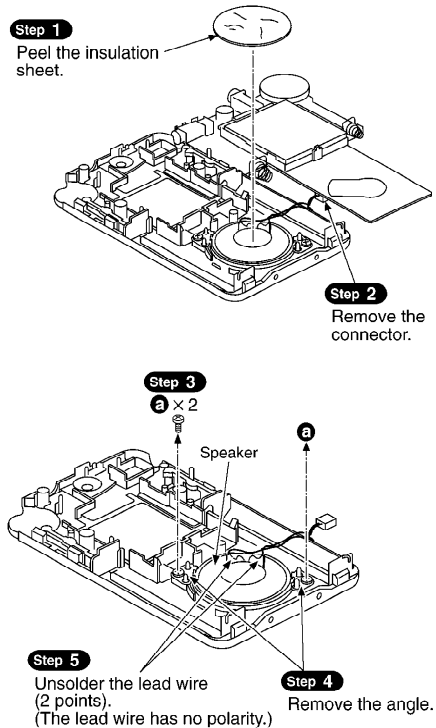
Notice for installation of rear cabinet ass'y

- Align the switch knob with the boss of switch, and then install the rear cabinet ass'y.



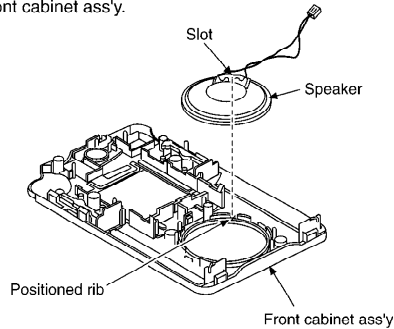
3. Replacement for the speaker

- Follow the **Step 1** ~ **Step 5** of the item 1 in checking for the P.C.B. (A side).
- Follow the **Step 2** , **Step 3** of the item 2 in checking for the P.C.B. (B side).



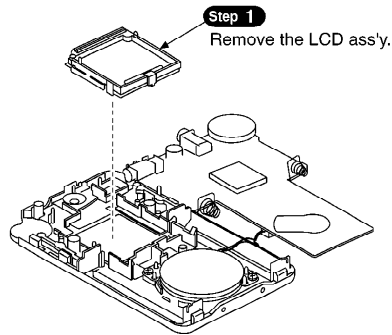
Notice for installation of speaker

- Align the slot of speaker with the positioned rib of front cabinet ass'y.



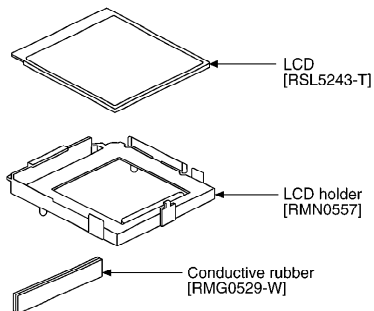
4. Replacement for the LCD

- Follow the **Step 1** ~ **Step 5** of the item 1 in checking for the P.C.B. (A side).
- Follow the **Step 1** ~ **Step 3** of the item 2 in checking for the P.C.B. (B side).



Step 2

Remove the LCD and conductive rubber from LCD holder.



4. Type Illustration of ICs, Transistors and Diodes

5. Schematic Diagram

5.1. Schematic Diagram Notes

- This schematic diagram may be modified at any time with the development of new technology.

Notes:

S1:

Divide switch (DIVIDE)

S2:

Erase switch (ERASE)

S3:

Play/stop select dial switch / (PLAY/STOP, SEL)

S4:



Recording, pause switch / (

REC,

PAUSE)

S5:

Hold switch (HOLD)

S6:

Battery cover close detection switch

S7:

Folder switch (FOLDER)

S9:

Mode switch (MODE)

S11:

Stop switch (STOP)

VR1:

Volume control VR (VOL)

- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

No mark

: Recording

()

: Playback

- Important safety notice:

Components identified by  mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufacturers specified parts shown in the parts list.

- Caution!

IC and LSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.

Cover the parts boxes made of plastics with aluminum foil.

Ground the soldering iron.

Put a conductive mat on the work table.

Do not touch the legs of IC or LSI with the fingers directly.

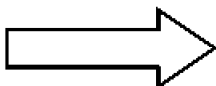
- Voltage and signal line



: Positive voltage line



: Source signal (analog) line



: Source signal (digital) line

5.2. Schematic Diagram

6. Printed Circuit Board Diagram

7. Block Diagram

8. Terminal Function of ICs

8.1. IC4 (MN101C16ACB3) : / System Control / LCD Drive

Pin No.	Terminal Name	I/O	Function
1	COM3	O	LCD segment signal output
2	COM2	O	LCD segment signal output
3	COM1	O	LCD segment signal output
4	COM0	O	LCD segment signal output
5	VLC3	-	LCD reference voltage input terminal (Connected to DGND)
6	VLC2	I	LCD reference voltage input terminal (1.1 V)
7	VLC1	I	LCD reference voltage input terminal (2.2 V)
8	VDD	-	Power supply terminal (3.3 V)
9	OSC2	-	Not used, open
10	OSC1	I	Main system clock input (f=8 MHz)
11	VSS	-	DGND terminal
12	XI	I	Crystal oscillator terminal (f=32.768 kHz)
13	XO	O	Crystal oscillator terminal (f=32.768 kHz)
14	MMOD	I	Mode select terminal (Conncted to DGND)
15	VREF-	I	Reference voltage input terminal
16	AN0	I	Switch detection terminal (STOP /FOLDER/DIVIDE)
17	AN1	I	Switch detection terminal (MODE, REC, ERASE)
18	KEY2	I	Switch detection terminal (HOLD)
19	AN3	I	Battery voltage input
20	PA4	I	FIFO buffer FULL detection signal input
21	PA5	I	CODEC (IC2) monitor terminal
22	PA6	I	FIFO buffer MID detection signal input
23	PA7	I	FIFO buffer EMPTY detection signal input
24	VREF+	I	Reference voltage input terminal (Connected to 3.3 V)
25	P00	O	CODEC (IC2) clock select signal output
26	P01	O	Memory enable signal output
27	P02	I	Memory busy/ ready signal input
28	P03	O	CODEC (IC2) chip enable signal output

Pin No.	Terminal Name	I/O	Function
29	P04	O	Memory chip enable signal output
30	P05	O	Memory command and data latch signal output
31	PWB CHK	-	Not used, open
32	/RST RU	I	Reset signal input
33	P10	O	CODEC (IC2) reset signal output
34	P11	O	CODEC (IC2) command/data select signal output
35	P12	O	Beep signal output
36	P13	O	CODEC (IC2) clock signal output
37	P14	O	Memory command/data select signal output
38	IREQ0	I	VAS voice detection signal input
39	IREQ1	I	Select dial detection signal input 1
40	IREQ2	I	Select dial detection signal input 2
41	IREQ3	I	Battery cover open detection signal input
42	IREQ4	I	Battery detection signal input
43	P30	-	Not used, open
44	P31	O	Memory reset signal output
45	P32	-	Not used, open
46	/WE	O	Parallel port write enable signal output
47	/RE	O	CODEC (IC2) read enable signal output Memory serial clock output
48	/CS	-	Not used, open
49	P53	O	A/D converter active signal output
50	P54	O	Power amp active select signal output
51	A0	-	Not used, open
52	A1	-	Not used, open
53	A2	-	Not used, open
54	A3	-	Not used, open
55	A4	-	Not used, open
56	A5	-	Not used, open
57	A6	-	Not used, open
58	A7	-	Not used, open
59	P70	O	Mute signal output

Pin No.	Terminal Name	I/O	Function
60	P71	O	LED drive signal (L: REC)
61	P72	O	Recording signal output (L: REC)
62	P73	O	Fast clock oscillator control signal output
63	P74	O	Microphone sensitivity setting signal output (H: High, L: Low)
64	P75	-	Not used, open
65	P76	-	Not used, open
66	P77	-	Not used, open
67	D7	I/O	Data command bus
68	D6	I/O	Data command bus
69	D5	I/O	Data command bus
70	D4	I/O	Data command bus
71	D3	I/O	Data command bus
72	D2	I/O	Data command bus
73	D1	I/O	Data command bus
74	D0	I/O	Data command bus
75	SEG25	-	Not used, open
76	SEG24	-	Not used, open
77	SEG23	-	Not used, open
78	SEG22	-	Not used, open
79	SEG21	-	Not used, open
80	SEG20	-	Not used, open
81	SEG19	O	LCD segment signal outputs
82	SEG18	O	LCD segment signal outputs
83	SEG17	O	LCD segment signal outputs
84	SEG16	O	LCD segment signal outputs
85	SEG15	O	LCD segment signal outputs
86	SEG14	O	LCD segment signal outputs
87	SEG13	O	LCD segment signal outputs
88	SEG12	O	LCD segment signal outputs
89	SEG11	O	LCD segment signal outputs
90	SEG10	O	LCD segment signal outputs
91	SEG9	O	LCD segment signal outputs
92	SEG8	O	LCD segment signal outputs
93	SEG7	O	LCD segment signal outputs
94	SEG6	O	LCD segment signal outputs
95	SEG5	O	LCD segment signal outputs
96	SEG4	O	LCD segment signal outputs
97	SEG3	O	LCD segment signal outputs
98	SEG2	O	LCD segment signal outputs
99	SEG1	O	LCD segment signal outputs
100	SEG0	O	LCD segment signal outputs

9. Replacement Parts List

Notes:

- Important safety notice:

Components identified by  mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufactures specified parts shown in the parts list.

- The <IA> <IB> <IC> marks in Remarks indicate language of instruction manual.

<IA> : English

<IB> : Canadian French

<IC> : English, German, French, Spanish, Chinese, Arabic, Italian

- The marking (RTL) indicates that Retention Time is Limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

- All parts are supplied by MESA.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
<u>1</u>	RYK0971B-S	FRONT CABINET UNIT	1	
<u>2</u>	RGV0231-H	KNOB,HOLD	1	
<u>3</u>	RHQ0051-K	SCREW	3	
<u>4</u>	RKW0592-Q	PANEL	1	
<u>5</u>	RYK0973B-H	REAR CABINET UNIT	1	
<u>6</u>	XTNR2+5CFN	SCREW	2	
<u>7</u>	RFKDNS300R-S	JOG SW ASS'Y(SW3)	1	
<u>7-1</u>	RGW0321-S	KNOB,JOG	1	
<u>8</u>	RHQ0060-N	SCREW	2	
<u>9</u>	RJC40017	BATT.TERMINAL +	1	
<u>10</u>	RJC80019	BATT.TERMINAL -	1	
<u>11</u>	RMG0529-W	ZEBRA GUM	1	
<u>12</u>	RMN0557	HOLDER	1	
<u>13</u>	RSL5243-T	LCD(LCD1)	1	
<u>14</u>	RJM0019	BUILT-IN MICROPHONE	1	
<u>15</u>	RAS3P16-U	SPEAKER	1	
<u>16</u>	REX0932-1	WIRE ASS'Y	1	
<u>17</u>	RGK1193-S	ORNAMENT	1	
<u>18</u>	RGL0461-Q	LENS	1	
<u>19</u>	RGU1796-S	BUTTON,DIVIDE/ERASE	1	
<u>20</u>	RGU1797-S	BUTTON,MODE/FOLDER	1	
<u>21</u>	RGU1798-S	BUTTON,REC/STOP	1	
<u>22</u>	RJC94013-2	BATT.TERMINAL+/-	1	
<u>23</u>	RMZ0466	SHEET	1	
<u>24</u>	XQN2+CQ3	SCREW	2	
<u>25</u>	RMX0165	SPACER	1	
<u>A1</u>	RQT5133-P	INSTRUCTION MANUAL	1	(P)<IA>
<u>A11</u>	RQA0178	WARRANTY CARD	1	(PC)
A12	RQT5133-P	INSTRUCTION MANUAL	1	(PC) / <IA>
<u>A13</u>	RQT5193-C	INSTRUCTION MANUAL	1	(PC) / <IB>
<u>A21</u>	RQA0117	WARRANTY CARD	1	(E)
A22	RQCB0169	SERVICE CENTOR LIST	1	(E)
<u>A23</u>	RQT5157-E	INSTRUCTION MANUAL	1	(E)<IC>
C3	ECST0GY226RR	4V 22U	1	
C4	ECUV1H332KBV	50V 3300P	1	
C5	RCST0GX476RE	4V 47U	1	
C7	ECUV1H222KBV	50V 2200P	1	
C8	ECUVNJ334KBV	6.3V 0.33U	1	
C9	ECUVNH103KBV	50V 0.01U	1	
C10	ECUV1H101KCV	50V 100P	1	
C11	ECUV1H332KBV	50V 3300P	1	
C12	ECUVNH103KBV	50V 0.01U	1	
C13	ECUV0J474KBV	6.3V 0.47U	1	
C14	ECUZNC104ZFV	16V 0.1U	1	
C15	ECUVNC474KBN	16V 0.47U	1	
C16	ECHU1C223JB5	16V 0.022U	1	
C17	ECST0GY226RR	4V 22U	1	
C19	ECUVNA105KBN	10V 1U	1	
C22	ECUV1H181KV	50V 180P	1	
C23	ECUVNA105KBN	10V 1U	1	
C24	ECUZNC104ZFV	16V 0.1U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C25,26	RCST0GC227RE	4V 220U	2	
C27	ECUZNC104ZFB	16V 0.1U	1	
C28	ECST0GY226RR	4V 22U	1	
C29	ECUZNC104ZFB	16V 0.1U	1	
C30	ECUV1H220JCV	50V 22P	1	
C31	ECUV1H120JCV	50V 12P	1	
C32	ECUZNC104ZFB	16V 0.1U	1	
C33	RCST0GD477RE	4V 470U	1	
C34	ECUZNC104ZFB	16V 0.1U	1	
C35	ECUVNH103KBV	50V 0.01U	1	
C36	ECUVNA105ZFB	10V 1U	1	
C37,38	RCST0GC227RE	4V 220U	2	
C39	ECUV1H332KBV	50V 3300P	1	
C40	ECST0GY106RR	4V 10U	1	
C41	ECUZNC104ZFB	16V 0.1U	1	
C42	ECUV1H151JCV	50V 150P	1	
C44,45	ECUZNC104ZFB	16V 0.1U	2	
C46	ECUV1H070DCV	50V 7P	1	
C47,48	ECUZNC104ZFB	16V 0.1U	2	
C49-51	ECUV1H102KBV	50V 1000P	3	
C53	ECUV1H181KV	50V 180P	1	
C54	ECUVNC104KBV	16V 0.1U	1	
C55	ECUVNA105KBN	10V 1U	1	
C56-59	ECUV1H102KBV	50V 1000P	4	
C60	ECUVNC104KBV	16V 0.1U	1	
C61	ECUZNC104ZFB	16V 0.1U	1	
C62	ECUV1H102KBV	50V 1000P	1	
C63	ECUVNA105KBN	10V 1U	1	
C73	ECUV1H101KCV	50V 100P	1	
C74,75	ECUVNH103KBV	50V 0.01U	2	
CN1	RJT120C02T	CONNECTOR(2P)	1	
D1	CL170HRCDT	LED	1	
D2	MA735TX	DIODE	1	
D3	MA143TX	DIODE	1	
D5	MA735TX	DIODE	1	
D6-D8	MA110TX	DIODE	3	
IC2	ML2301GA	IC	1	
IC3	TC7WU04FUT2L	IC	1	
IC4	MN101C16ACB3	IC	1	
IC5	TC7W74FUT2L	IC	1	
IC6	XC61AN2002MR	IC	1	
IC7	TC7WH157FUTL	IC	1	
IC8	XC6368B101MR	IC	1	
IC9	HN29W6411TT	IC	1	
IC10,11	TC7WH157FUTL	IC	2	
IC12	XC61AN1802MR	IC	1	
IC13	NJM2107FTE1	IC	1	
IC14	NJM2135RTE1	IC	1	
JK1	RJJ34TK05-H	JACK,EARPHONE	1	
JK2	RJJ33TK10-H	JACK,MIC	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
L1	RL09U028T-T	COIL	1	
L2,L3	RLQPR22KT2-Y	COIL	2	
P1	RPN1246	TRAY	1	(P)
P2	RPN1247	COVER	1	(P)
P3	RPQ1007	SHEET	1	(P)
P11	RPK1310	GIFT BOX	1	(PC)
P12	RPF0208	SHEET	1	(PC)
P21	RPF0208	SHEET	1	(E)
P22	RPK1299	GIFT BOX	1	(E)
PCB1	REP2896B-M	MAIN PCB	1	(RTL)
Q2	DTC144TUA106	TRANSISTOR	1	
Q3	2SK1958T1	TRANSISTOR	1	
Q5	UN521NTX	TRANSISTOR	1	
Q6	2SD1819ASTX	TRANSISTOR	1	
Q8	2SD1119RTX	TRANSISTOR	1	
Q10	2SB1295-6-TB	TRANSISTOR	1	
Q13,14	2SK1958T1	TRANSISTOR	2	
Q16	DTC144TUA106	TRANSISTOR	1	
Q17	2SD1819ASTX	TRANSISTOR	1	
Q20	2SB1295-6-TB	TRANSISTOR	1	
Q21	2SB1218ASTX	TRANSISTOR	1	
R4	ERJ3GEYJ682V	1/16W 6.8K	1	
R6	ERJ3GEYJ563V	1/16W 56K	1	
R7	ERJ3GEYJ472V	1/16W 4.7K	1	
R8	ERJ3GEYJ183V	1/16W 18K	1	
R9	ERJ3GEYJ102Z	1/16W 1K	1	
R10,11	ERJ3GEYJ222V	1/16W 2.2K	2	
R12	ERJ3GEYJ225V	1/16W 2.2M	1	
R14	ERJ3GEYJ105V	1/16W 1M	1	
R15	ERJ3GEYJ563V	1/16W 56K	1	
R16	ERJ3GEYJ224V	1/16W 220K	1	
R17	ERJ3GEYJ681V	1/16W 680	1	
R18,19	ERJ3GEYJ105V	1/16W 1M	2	
R20	ERJ3GEYJ681V	1/16W 680	1	
R21-23	ERJ3GEYJ474V	1/16W 470K	3	
R24,25	ERJ3GEYJ104Z	1/16W 100K	2	
R26	ERJ3GEYJ683V	1/16W 68K	1	
R27	ERJ3GEYJ124V	1/16W 120K	1	
R28,29	ERJ3GEYJ104Z	1/16W 100K	2	
R30	ERJ3GEYJ683V	1/16W 68K	1	
R31	ERJ3GEYJ124V	1/16W 120K	1	
R32	ERJ3GEYJ334V	1/16W 330K	1	
R33,34	ERJ3GEYJ105V	1/16W 1M	2	
R36	ERJ3GEYJ104Z	1/16W 100K	1	
R37	ERJ3GEYJ152V	1/16W 1.5K	1	
R38	ERJ3GEYJ105V	1/16W 1M	1	
R39	ERJ3GEYJ472V	1/16W 4.7K	1	
R40	ERJ3GEYJ102Z	1/16W 1K	1	
R41	ERJ3GEYJ100V	1/16W 10	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R42,43	ERJ3GEYJ104Z	1/16W 100K	2	
R44	ERJ3GEYJ102Z	1/16W 1K	1	
R47	ERJ3RED105V	1/16W 1M	1	
R48	ERJ3RED434V	1/16W 430K	1	
R49	ERJ3GEYJ105V	1/16W 1M	1	
R51	ERJ3GEYJ102Z	1/16W 1K	1	
R52	ERJ3GEYJ100V	1/16W 10	1	
R53	ERJ3GEYJ103Z	1/16W 10K	1	
R54	ERJ3GEYJ154V	1/16W 150K	1	
R55-58	ERJ3GEYJ153V	1/16W 15K	4	
R59	ERJ3GEYJ334V	1/16W 330K	1	
R60	ERJ3GEYJ473V	1/16W 47K	1	
R61	ERJ3GEYJ124V	1/16W 120K	1	
R62	ERJ3GEYJ103Z	1/16W 10K	1	
R63	ERJ3GEYJ222V	1/16W 2.2K	1	
R64	ERJ3GEYJ153V	1/16W 15K	1	
R65	ERJ3GEYJ183V	1/16W 18K	1	
R66	ERJ3GEYJ222V	1/16W 2.2K	1	
R67	ERJ3GEYJ103Z	1/16W 10K	1	
R68	ERJ3GEYJ105V	1/16W 1M	1	
R69	ERJ3GEYJ100V	1/16W 10	1	
R70,71	ERJ3GEYJ104Z	1/16W 100K	2	
R72	ERJ3GEYJ330V	1/16W 33	1	
R73	ERJ3GEYJ223V	1/16W 22K	1	
R74,75	ERJ3GEYJ103Z	1/16W 10K	2	
RJ3	ERJ3GEY0R00V	CHIP JUMPER	1	
S1,2	EVQPLMA15	SW,DIVIDE/ERASE	2	
S3	RFKDNS300R-S	SW ASS'Y,PLAY/STOP/SEL	1	
S4	EVQPLMA15	SW,REC/PAUSE	1	
S5	RSS2A010-1A	SW,HOLD	1	
S6	RSH1A039-A	SW,BATT.COVER	1	
S7	EVQPLMA15	SW,FOLDER	1	
S9	EVQPLMA15	SW,MODE	1	
S11	EVQPLMA15	SW,STOP	1	
VR1	EVUTUHB07C54	VR,VOLUME	1	
X1	RSXY8M19M01T	OSCILLATOR	1	
X2	RSXC32K7L04T	OSCILLATOR	1	
X3	RSXY11M0M01T	OSCILLATOR	1	

10. Cabinet Parts Location

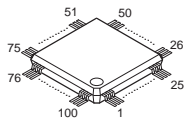
11. Packaging

11.1. Packaging for (P) area

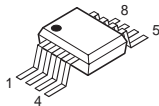
11.2. Packaging for (PC) and (E) areas

F990906700MT/YM/KH

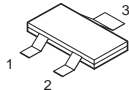
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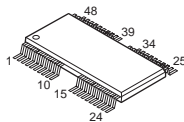
TC7WH157FUTL
TC7W74FUT2L
TC7WU04FUT2L



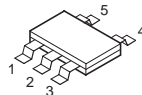
XC61AN1802MR
XC61AN2002MR



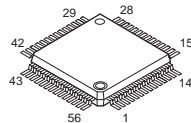
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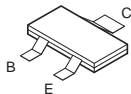
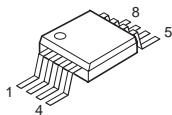
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XC6368B101MR



ML2301GA

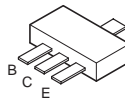


NJM2135RTE1

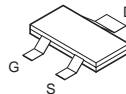


DTC144TUA106
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2SB1295-6-TB
2SD1819ASTX

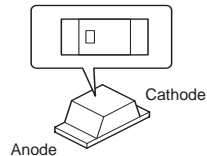
2SD1119RTX



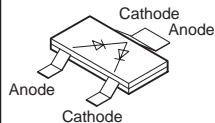
2SK1958T1



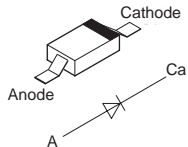
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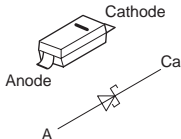
MA143TX

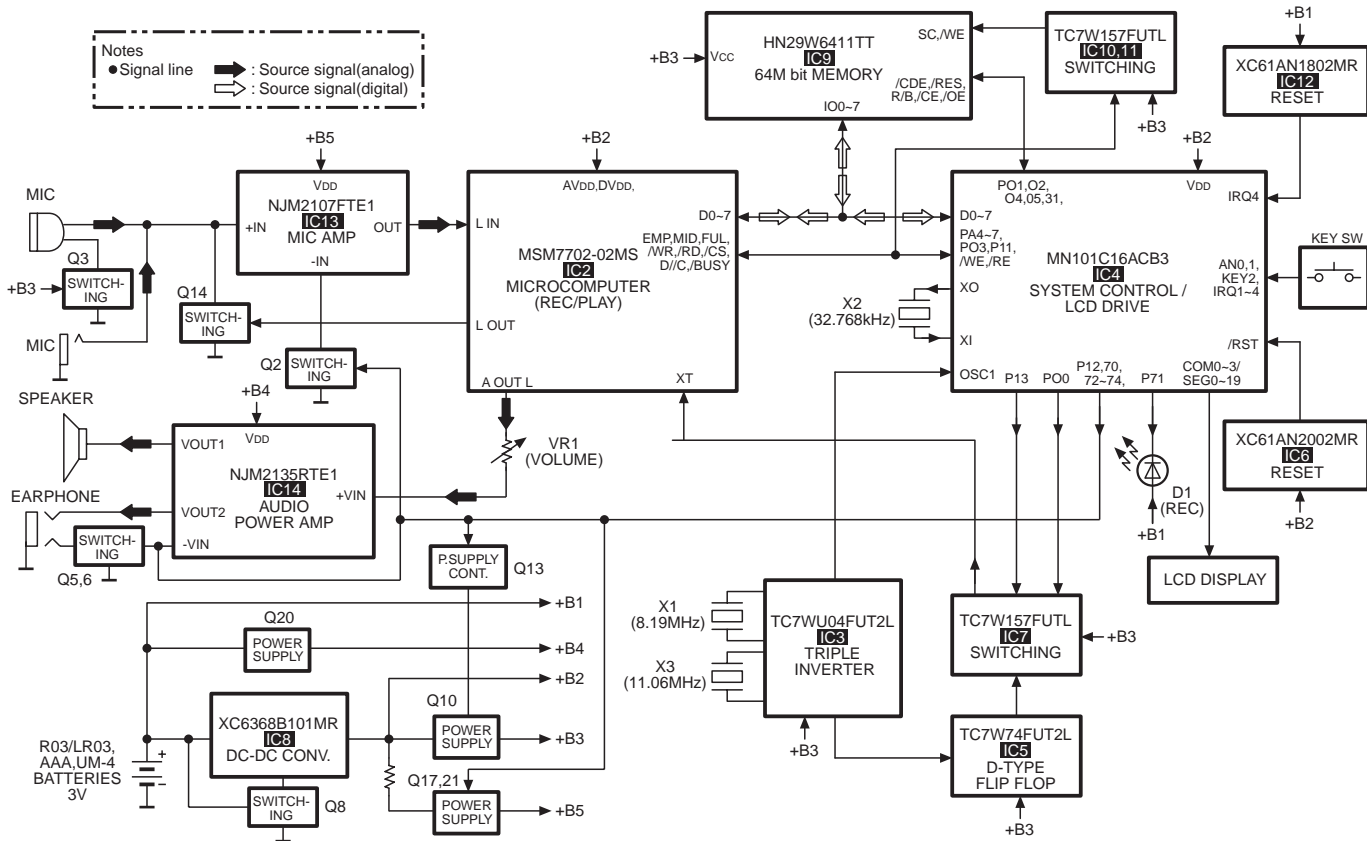


MA110TX



MA735TX





A B C D E F

1

2

3

4

5

6

7

8

(SIDE : A)

VOLUME

HOLD

■ ELECTRICAL PARTS LOCATION

Ref. No.	Lo. No.	Ref. No.	Lo. No.
IC2	6D	R61	2D
IC3	5D	R62	2E
IC5	5D	R63	2C
IC7	6D	R64	2D
IC8	3D	R65	2C
IC9	4D	R66	2C
IC13	2D	R67	2D
IC14	2C	R68	2D
Q3	2D	R69	4E
Q6	2C	R70	2D
Q8	3D	R74	3C
Q10	4E	R75	3C
Q13	3E	RJ3	4E
Q14	2E	C3	2D
Q17	2D	C4	2C
Q20	2C	C5	2D
Q21	2D	C7	2F
D2	3E	C8	2C
D5	4C	C9	2C
D6	7D	C10	2C
D7	7D	C11	2D
D8	2D	C12	2C
VR1	2E	C13	2D
L1	3C	C14	2D
L3	2D	C15	2E
X1	5D	C22	7E
X2	3E	C23	7E
X3	6D	C24	7E
S5	3C	C25	7C
S6	5D	C26	6C
CN1	6E	C27	7E
R4	2C	C28	3D
R6	2C	C29	3E
R7	2F	C32	5E
R8	3C	C33	4E
R10	2E	C35	4C
R14	2D	C36	4F
R16	7D	C37	3E
R17	5C	C38	3E
R18	5D	C39	3D
R20	6D	C40	4C
R25	4E	C41	4C
R27	3D	C42	3D
R34	5D	C44	6D
R38	3E	C46	6D
R39	3E	C50	3E
R40	3D	C60	73
R41	4E	C61	2D
R47	2D	C62	2C
R48	2D	C63	2C
R49	2D	C74	3D
R60	2D	C75	3D

Tow R03/LR03,
AAA,UM-4
BATTERIES 3V

(BATT. COVER
CLOSE DET.)

SPEAKER
2.8cm(1 3/32"), 8Ω

(REP2896B-M)

A B C D E F

(SIDE : B)

EARPHONE

DIVIDE

ERASE

STOP

● REC / ■ PAUSE

MODE

FOLDER

■ ELECTRICAL PARTS LOCATION

Ref. No.	Lo. No.	Ref. No.	Lo. No.
IC4	3C	R36	3D
IC6	5C	R37	2B
IC10	6C	R42	5C
IC11	6C	R43	6D
IC12	5C	R44	6D
Q2	2B	R51	5C
Q5	2B	R52	7B
Q16	7D	R53	7C
D1	2B	R54	7C
D3	7C	R55	7C
L2	2A	R56	7C
LCD1	2C	R57	7C
S1	3B	R58	7C
S2	4B	R59	2C
S3	2D	R71	5C
S4	5D	R72	2A
S7	4D	R73	5C
S9	3D	C16	2B
S11	5B	C17	2C
JK1	2A	C19	6D
JK2	2C	C30	3B
R9	2B	C31	3B
R11	2B	C34	5C
R12	7D	C45	5C
R15	7C	C47	6C
R19	6C	C48	6C
R21	3B	C49	5C
R22	3B	C51	7C
R23	3B	C53	7C
R24	4B	C54	7C
R26	4D	C55	7C
R28	5C	C56	7C
R29	5C	C57	7C
R30	5C	C58	7C
R31	4D	C59	7C
R32	3B	C73	7C
R33	4B		

